ITRONIX®	TECHNICAL NOTE	Number	547
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TITLE:	FC-PX5 Win 95 Image restore/backup for removable cards
ABSTRACT:	An explanation of how to re-install and backup the Windows 95 Image on a removable PC card for use in the FC-PX5

Requirements:

PCMCIA flash card or spinning disk (220Mb or greater)
IBM compatible PC with MS-DOS 6.22 or Windows '95
Norton Ghost (Disk Imaging and Backup Software)
PC Card Socket and DOS Card Services
Windows 95 Image file (required for disk restore only)

System Limitations and Recommendations:

This guide has been written for Norton Ghost version 5.1. Customers should be using Windows 95 or MS-DOS 6.22 for the image restoration procedure. Windows NT will not allow Norton Ghost to directly access hardware such as hard disk drives. Note that Windows 95 systems should be restarted in MS-DOS mode and should additionally have the DOS Card Services installed.

Licensing Issues

It is imperative that users are aware of the licensing issues that surround the backup and recovery of operating systems and applications. Each FC-PX5 that comes with Windows '95 has it's own unique OEM license number that must be entered before the operating system can be used. It is ***illegal*** to make more than one backup copy of licensed software.

Where an image file is supplied by WPI Husky Technology, this has not been activated (i.e. OEM license number not entered) this file can be used for image restore purposes however **each restoration generated from the image file must have it's own unique license number.**

IMPORTANT NOTE: Only Husky Companies listed in the Microsoft Agreement can maintain master copies of the Windows 95 disk image. WPI Husky Technology cannot be held responsible for customers copying software illegally. If you are still unsure about this then please call +44 (0)1203 60 40 40 and ask for Technical Support.

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Getting Started:

Before proceeding, ensure a valid Microsoft Licence is held for the image being used.

Restoring a Hard Disk Image:

- Ensure Cardware is installed on the PC and the PC Card can be accessed from a DOS prompt.
- Install a licensed copy of Norton Ghost on the PC

Note that **all information contained on the PC Card will be overwritten**. Therefore any data should be backed up before proceeding.

- Run the Ghost application by typing GHOST [ENTER] on the PC from the installation directory.
- From the menu select '**Local**' then '**Disk**' then '**From Image**'.
- In the Directory dialogue box locate and select the appropriate image file, for example **D:\IMAGES\WIN95US.GHO**
- Next select the destination disk (PC Card) from the list of available drives, for example '**2 = 210Mb Partition**', to ensure the correct partition is selected compare the reported size against the size of the PC-Card.
- The partition sizes for the card will be shown next, use the default size and confirm with the OK button.
- Finally confirm you wish to proceed with disk load by choosing the YES button.

The image will now be restored to the PC Card. Once completed, Ghost will ask if you wish to 'restart the computer' referring to restarting the PC, this is not normally necessary. The operation is now complete and the PC-Card should be inserted in the PX5 unit. The PX5 may now need configuring to boot from the external PC-Card slot.

- Reboot the PX5 and press the [CTRL], [ALT], [ESC] keys when prompted, the BIOS setup screen will now be displayed
- Press the 'L' key to select the 'Slots' screen
- Check the line 'Internal ATA' to ensure the Function is set to 'None', if it is set to 'Drive C' then press the [Enter] key and select none from the list
- Use the arrow keys to move down to the External slot containing the PC-Card
- Press [Enter] and select 'Drive C' from the list
- Press [ESC] twice to display the 'Save Changes' dialogue and Press 'Y' to confirm

The PX5 will now reboot and the operation is complete. If any problems occur then please contact your supplier.

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Backing up a hard disk image from a removable disk.

Before proceeding, ensure the above licensing issues have been read and understood.

To create a backup image requires the FC-PX5 unit contains a valid working installation of the Windows 95 operating system. The backup process will create an image of the entire hard disk, it is therefore the responsibility of the user to ensure that creating a backup of any additional software that has been installed is permitted under the relevant licence agreement(s).

The process is as follows.

- Power down the FC-PX5
- Remove the PC-Card and Insert into the PCMCIA drive on the IBM compatible PC
- Run the Ghost application by typing GHOST [ENTER] on the PC from the installation directory
- From the menu select '**Local**' then '**Disk**' then '**To Image**'
- On the drive selection screen locate the correct drive number by matching the drive size (Mb) to the actual size of the PC-Card, for example '**2=210Mb**'
- Next select the target directory to store the image, for example **C:\IMAGES**
- In the filename box type an appropriate name, for example **WIN95US**. Note that the Ghost software will automatically add the .GHO extension to the filename.
- The next prompt asks what compression method you wish to use. The normal method is 'Fast' which uses minimum compression however 'High' may be chosen if disk space is limited.
- Finally confirm you wish to proceed.

The disk image will now be created and a status bar will show the progress. Once completed the PC-Card can be removed and fitted back in the FC-PX5 unit.

This document is intended as a guide only and does not describe the full implementation of Norton Ghost.